

REMARKS

Applicant respectfully requests consideration of the subject application. This Response is submitted in response to the Office Action mailed September 3, 2008. Claims 34-56 are pending. Claims 34-56 are rejected. Claims 1-33 are cancelled. No new matter has been added.

35 U.S.C. § 102 Rejections

The Examiner has rejected claims 34-36, 38, 41-45, 47-52 and 56 under 35 U.S.C. § 102(b) as being anticipated by Lange, (U.S. Patent No.: 6,003,619, hereinafter “Lange”).

Applicant respectfully submits that Lange is no more relevant than the previously cited documents (Minotti et al. and MacOnochie). Indeed, the Lange device exemplifies the prior art gravity drop hammers and inherently has the same problems as such prior art.

The examiner asserts that the Lange device has a hammer 10 comprising weight 38 and anvil 60 where the ends of the weight 38 and/or anvil 60 are capable of extending through the housing 34 to strike the working surface 80. The examiner asserts that the hammer 38, 60 is capable of being removed from the housing 34, reversed and replaced in the housing 34.

However, applicants respectfully disagree with this assertion, as explained below.

- There is no part of the Lange weight 38 that is capable of extending from the housing 34 and the weight does not appear to be reversible as the lifting rack 58 would not engage with the dogs 54, 56 if reversed. There also does not appear to be any discernable purpose in reversing the weight.

- The ends of the Lange anvil 60 each have a different purpose and are not interchangeable, i.e. the lower end of the anvil 60 includes a connector 66 designed to couple with the member 70 to be driven into the ground. Clearly, if this connector 66, or indeed any part of the lower end, is subject to impacts from the weight 38 it will quickly be damaged and will no longer be useful as a connector. Correspondingly, the upper end of the anvil 60 is designed to be impacted by the weight 38 and therefore must be sufficiently strong and flat to evenly transfer the impact force to the member 70 or lever 76. The upper end does not include a connector 66 and therefore cannot be coupled (without significant working) to the member 70, which is the inherent purpose of the Lange invention.

The Lange hammer is thus similar to other prior art gravity drop hammers that use a weight dropped onto a anvil/hammer which in turn strikes a working surface. The disadvantages of such prior art drop hammers are described in the present specification and the present invention was devised to overcome such problems.

In the prior art, the striking hammer/anvil cannot be reversed as the end impacted by the weight must be flat or would otherwise become deformed by successive impacts. The impact end is therefore not used for striking and the entire tool has to be removed and machined or replaced to repair the effects of wear on the striking end.

Axiomatically, the striking end cannot be used to receive impacts from the weight as the impact force is unevenly distributed through what is typically a pointed, or sharp-edged tip or similar. Damage to the hammer, housing and drive mechanism is likely to occur if a non-flat striking end is impacted by the weight.

In contrast, the present claimed invention uses an elongate reciprocating hammer with two tool ends. This single unitary hammer acts as both the weight and hammer and therefore does not require a separate impacting weight. The hammer can be reversed so either end can be used as a striking end. In addition to embodiments where the hammer itself has sufficient weight to be used as a drop hammer, the hammer may also be configured to be driven into the surface by the drive mechanism.

Such a drive mechanism as described in the present specification engages with the hammer to both ‘lift up’ and ‘drive down’ the hammer, thereby reciprocating the hammer. This drive mechanism is necessary in many applications as the weight and fall distance of the hammer may not be sufficient to provide the necessary striking force. The drive mechanism may thus provide additional impetus to the hammer and allow the hammer to strike surfaces that are not necessarily below the hammer.

Thus, drop hammers utilizing a weight falling onto an anvil or an impact tool are not relevant to the present claimed invention as these prior art hammers cannot be reversed and still function as intended. The present claimed invention was specifically designed to overcome the shortcomings of such prior art ‘weight-and-anvil’ drop hammers.

It should be noted that the present claimed invention is novel over Lange for the same reasons as over the previously cited art, e.g. MacOnochie. Our submissions filed in response to the previous office actions are therefore also entirely relevant to the present objections and should be considered as part of this response.

Applicant, accordingly, respectfully requests withdrawal of the rejections under 35 U.S.C. § 102.

35 U.S.C. § 103 Rejections

The Examiner has rejected claim 35 under 35 U.S.C. § 103(a) as being unpatentable over Lange. The Examiner has rejected claims 39-40 and 53-55 under 35 U.S.C. § 103(a) as being unpatentable over Lange in view of MacOnochie, (U.S. Patent No.: 4,838,363, hereinafter “MacOnochie”). The Examiner has rejected claim 46 under 35 U.S.C. § 103(a) as being unpatentable over Lange in view of Thomson, (U.S. Patent No.: 1,570,650, hereinafter “Thomson”).

As all the subsequent claims 35-56 are dependent on claim 34, we submit these are similarly novel and should be allowed to proceed to allowance.

Applicant respectfully submits the rejections under 35 USC § 103 should also be withdrawn for at least the reasons outlined above.

Applicant respectfully submits that the present application is in condition for allowance.

Please charge any shortages and credit any overages to Deposit Account No. 19-3140. Any necessary extension of time for response not already requested is hereby requested. Please charge any corresponding fee to Deposit Account No. 19-3140.

Respectfully submitted,
SONNENSCHEIN NATH & ROSENTHAL LLP

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/Stephen M. De Klerk/

Stephen M. De Klerk
Reg. No. 46,503

P.O. Box 061080
Wacker Drive Station, Sears Tower
Chicago, Illinois 60606-1080
650-798-0342